SyncMaster 960BG

Install drivers

Windows Me Windows 98

Windows 2000 Windows XP

Install programs

Natural Color

AutoRotation

AutoRotation

Notational

Please read the following safety instructions as they are designed to prevent damage to property and harm to the user.

Warning / Caution

Failure to follow directions noted by this symbol could result in bodily harm or damage to equipment.

Notational Conventions

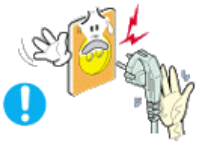
Prohibited	Important to read and understand at all times
Do not disassemble	Disconnect the plug from the outlet
Do not touch	Grounding to prevent an electric shock

Power

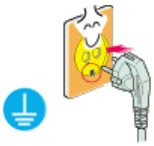
When not used for extended period of time, set your computer to DPMS.
If using a screen saver, set it to the active screen mode.

Shortcut to Anti-Afterimage Instructions

- **Do not use a damaged or loose plug.**
  - This may cause an electric shock or fire.



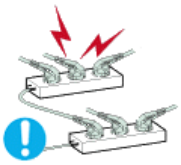
- **Do not pull the plug out by the wire nor touch the plug with wet hands.**
  - This may cause an electric shock or fire.



- **Use only a properly grounded plug and receptacle.**
  - An improper ground may cause electric shock or equipment damage.

- **Insert the power plug firmly so that it does not come loose.**
  - A bad connection may cause fire.

- **Do not excessively bend the plug and wire nor place heavy objects upon them, which could cause damage.**
  - This may cause an electric shock or fire.



- **Do not connect too many extension cords or plugs to an outlet.**
  - This may cause fire.

Installation

Be sure to contact an authorized Service Center when installing your set in a location with heavy dust, high or low temperatures, high humidity, and chemical substances, or where it will be operated for 24 hours continuously such as an airport, train station or etc.

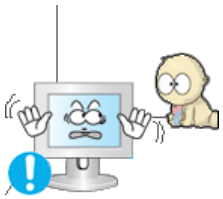
Failure to do so may cause serious damage to your set.

- **Put your monitor in a location with low humidity and a minimum of dust.**
  - Failure to do so may cause an electric shock or fire inside the monitor.

- **Do not drop the monitor when moving it.**
  - This may cause damage to the product or human body.

- **Install the monitor base in a showcase or shelf so that the end of the base does not protrude from the showcase or shelf.**
  - Dropping the product may cause damage to the product or personal injury.

- **Do not place the product on an unstable or small surface area.**
  - Place the product on an even, stable surface, as the product may fall and cause harm to someone walking by, specifically children.



- **Do not place the product on the floor.**
  - Someone, specifically children could trip over it.

- **Keep any flammable objects such as candles, insecticides or cigarettes away from the product.**
  - Otherwise, this may cause a fire.

- **Keep any heating devices away from the power cable.**
  - A melted coating may lead to electric shock or fire.

- **Do not install the product in places with poor ventilation, for instance, a bookshelf, closet, etc.**
  - Any increase in internal temperature may cause fire.

- **Set down the monitor carefully.**
  - The monitor could be damaged or broken.

Do not place the monitor face down.

- The TFT-LCD surface may be damaged.

Installing a wall bracket must be done by a qualified professional.

- Installation by unqualified personnel may result in injury.
- Always use the mounting device specified in the owner's manual.

When installing the product, make sure to keep it away from the wall (more than 10 cm/4 inch) for ventilation purposes.

- Poor ventilation may cause an increase in the internal temperature of the product, resulting in a shortened component life and degraded performance.

Clean

When cleaning the monitor case or the surface of the TFT-LCD screen, wipe with a slightly moistened, soft fabric.

Do not spray water or detergent directly on the monitor.

Use the recommended detergent with a smooth cloth.

If the connector between the plug and the pin is dusty or dirty, clean it properly with a dry cloth.

- A dirty connector may cause an electric shock or fire.

Make sure to unplug the power cord before cleaning the product.

- Otherwise, this may cause electric shock or fire.

- **Unplug the power cord from the power outlet and wipe the product using a soft, dry cloth.**
  - Do not use any chemicals such as wax, benzene, alcohol, thinners, insecticide, air freshener, lubricant or detergent.

- **Contact the Service Center or Customer Center for interior cleaning once a year.**
  - Keep the product's interior clean. Dust which has accumulated in the interior over an extended period of time may cause malfunction or fire.

Others

- **Do not remove cover (or back).**
  - This may cause an electric shock or fire.
  - Refer servicing to qualified service personnel.

- **If your monitor does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or service.**
  - This may cause an electric shock or fire.

- **Keep the product away from places exposed to oil, smoke or moisture; do not install inside a vehicle.**
  - This may cause malfunction, an electric shock or fire.
  - Especially avoid operating the monitor near water or outdoors where the monitor could be exposed to snow or rain.

- **If the monitor is dropped or the casing is damaged, turn the monitor off and unplug the power cord. Then contact the Service Center.**
  - The monitor may malfunction, causing an electric shock or fire.

- **Disconnect the plug from the outlet during storms or lightening or if it is not used for a long period of time.**
  - Failure to do so may cause an electric shock or fire.

- **Do not try to move the monitor by pulling only the wire or the signal cable.**
  - This may cause a breakdown, electric shock or fire due to damage to the cable.

- **Do not move the monitor right or left by pulling only the wire or the signal cable.**
  - This may cause a breakdown, electric shock or fire due to damage to the cable.

- **Do not cover the vents on the monitor cabinet.**
  - Bad ventilation may cause a breakdown or fire.

- **Do not place water containers, chemical products or small metal objects on the monitor.**
  - This may cause malfunction, an electric shock or fire.
  - If a foreign substance enters the monitor, unplug the power cord and contact the Service Center .

- **Keep the product away from combustible chemical sprays or inflammable substances.**
  - This may cause an explosion or fire.

- **Never insert anything metallic into the monitor openings.**
  - This may cause an electric shock, fire or injury.

- **Do not insert metal objects such as chopsticks, wire and gimlet or inflammable objects such as paper and match into the vent, headphone port or AV ports.**
  - It may cause a fire or an electric shock. If an alien substances or water flows into the product, turn the product off, unplug the power connector from the wall outlet and contact Service Center.

- **If you view a fixed screen for an extended period of time, residual image or blurriness may appear.**
  - Change the mode to energy save or set a screensaver to moving picture when you need to be away from the monitor for an extended period of time.

- **Adjust the resolution and frequency to the levels appropriate for the model.**
  - Inappropriate resolution may cause undesirable picture quality.

    19 inch (48 cm) - 1280 X 1024

- **Be careful that adapter should not be in contact with water and therefore not be wet.**
  - This may cause malfunction, an electric shock or fire.
  - Do not use adapter by the waterside or outside particularly when it rains or snows.
  - Be careful that adapter should not be wet while cleaning floor with water.

- **Keep all power adapters apart.**
  - Failure to do so may cause fire.

- **Keep power adapter away from any other heat source.**
  - Failure to do so may cause fire.

- **Remove and discard vinyl bag from power adapter before use.**
  - Failure to do so may cause fire.

- **Always keep power adapter in well-ventilated area.**

- **Watching the monitor continuously at a too close angle may result in eyesight damage.**

- **To ease eye strain, take at least a five-minute break after every hour of using the monitor**.

- **Do not install the product on an unstable, uneven surface or a location prone to vibrations.**
  - Dropping the product may cause damage to the product or personal injury. Using the product in a location prone to vibrations may shorten the lifetime of the product or may catch fire.

- **When moving the monitor, turn off and unplug the power cord. Make sure that all cables, including the antenna cable and cables connected to other devices, are disconnected before moving the monitor.**
  - Failure to disconnect a cable may damage it and lead to fire or an electric shock.

- **Place the product out of children's reach, as they could damage it by hanging onto it.**
  - A falling product could cause physical damage even death.

- **When not using the product for an extended time period, keep the product unplugged**
  - Otherwise, this may cause heat emission from the accumulated dirt or degraded insulation, leading to electric shock or fire.

- **Do not place children's favorite objects (or anything else that may be tempting) on the product.**
  - Children may try to climb on the product to retrieve an object. The product could fall, causing physical damage or even death.

List of Features

RTA Monitor

RTA(Response Time Accelerator)
A function that accelerates the response speed of the panel so as to provide a sharper and more natural video display.

- Magic Contrast: Supports a contrast of up to 700:1 for deeper color tones.
- Magic Speed: Offers a clear image with no afterimages by supporting a fast response rate of 4ms.
- Magic Stand: Allows users to adjust the height of the monitor for user convenience.
- When changing the monitor angle to your preference, MagicRotation will automatically adjust the image accordingly.

Please make sure the following items are included with your monitor.
If any items are missing, contact your dealer.
Contact a local dealer to buy optional items.

Unpacking

Monitor

Manual

Quick Setup Guide

Warranty Card
(Not available in all locations)

User's Guide, Monitor Driver, Natural Color software, MagicTune™ software, MagicRotation software

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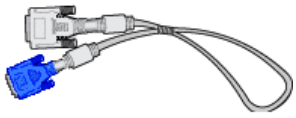
Cable

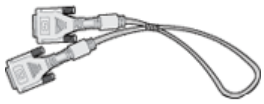


'DVI-A to D-Sub' Cable

Power Cord

DC-Adapter

Sold separately



DVI Cable

Front

Power indicator / The blue light is on in its normal working condition and blinks when setting

Power button [⏻]

the adjustments of the monitor.
Use this button for power the monitor on and off, change the input source, or perform Auto Adjustment.

※ **Power On/Off** : When you press the power button, the monitor is on/off.
>>Click here to see an animation clip

※ **Input Source** : When you press the power button, the input source may be changed to Analog or Digital, blinking once with blue lihgt.
>>Click here to see an animation clip

※ **Auto adjustment** : When you press the power button, the Auto Adjustment function is activate, blinking twice with blue light. (Analog only)
>>Click here to see an animation clip

See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your monitor OFF when it is not needed or when leaving it unattended for long periods.

Rear

(The configuration at the back of the monitor may vary from product to product.)

1 Kensington Lock

The Kensington lock is a device used to physically fix the system when using it in a public place.
(The locking device has to be purchased separately.)
For using a locking device, contact where you purchase it.

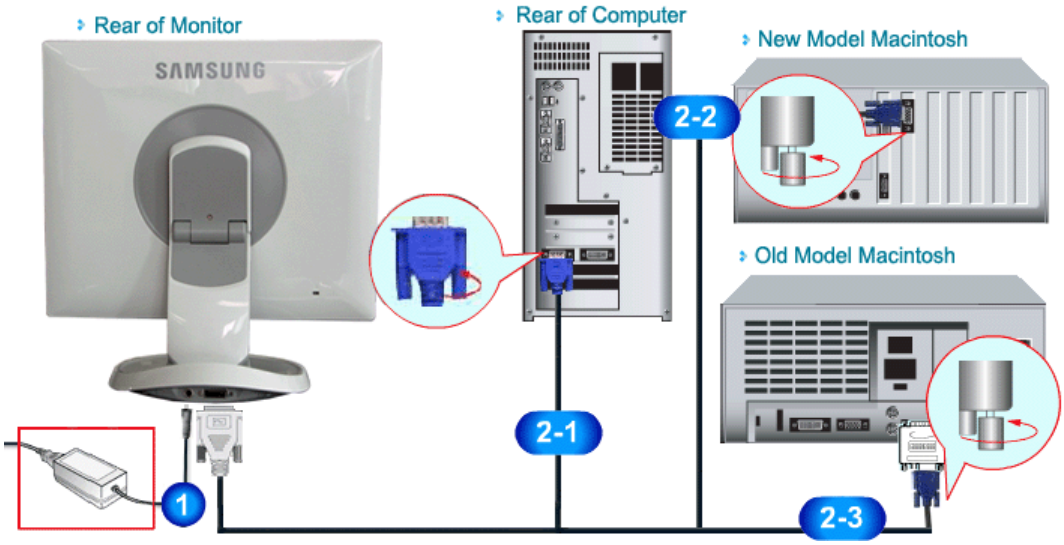
2 DC 14V

Connect the DC adapter for your monitor to the power port on the back of the monitor. Plug the power cord for the monitor into a nearby outlet.

3	**DVI-I**	Connect the 'DVI-A to D-Sub' Cable to the DVI port on the back of your monitor.

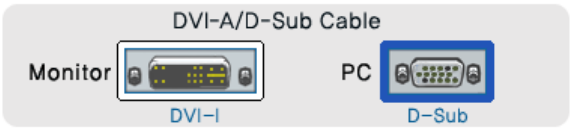
See Connecting the Monitor for further information regarding cable connections.

Connecting the Monitor



1. Connect the DC 14V adapter for your monitor to the power port on the back of the monitor. Plug the power cord for the monitor into a nearby outlet.

2-1. Using the D-Sub (analog) connector on the video card.
Connect the 'DVI-A to D-Sub' Cable to the DVI-I port on the back of your monitor.



2-2. Connected to a Macintosh.
Connect the monitor to the Macintosh computer using the 'DVI-A to D-Sub' connection cable.

2-3. In the case of an old model Macintosh, you need to connect the monitor using a special Mac adapter.

3. Turn on your computer and monitor. If your monitor displays an image, installation is complete.

If you properly connect your monitor using the DVI-I connector but get a blank screen, check to see if the monitor status is set to analog. Press power button to have the monitor double-check the input signal source.

Using the Stand

- **Pivot Stand**

Even when the monitor is completely folded, the monitor screen is still approximately 2 cm (0.8 inch) off the floor. Do not press the monitor screen further against the floor.

This monitor cannot be installed with a supporting device (arm-support, wall bracket or other) other than the one provided.

(When pivoting the monitor, rotation angle is displayed on screen of the monitor.)

0°

90°

When pivoting the monitor, the corner of the monitor may reach to the floor. Tilt the monitor

backward more than 45 degrees and then pivot it. Failure to do so may damage the monitor.

Installing the Monitor Driver (Automatic)

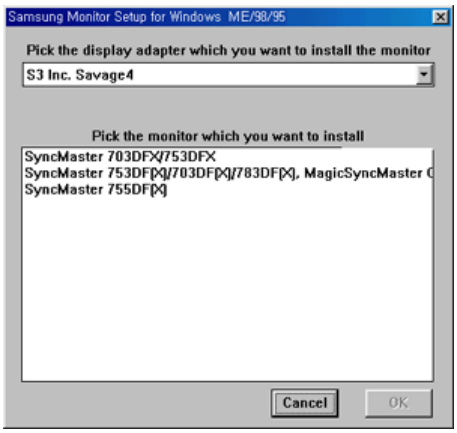
When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.

Prepare a blank disk and download the driver program file at the Internet web site shown here.

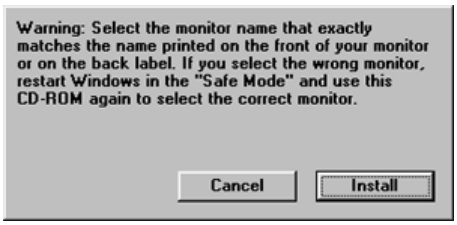
- Internet web site : http://www.samsung.com/ (Worldwide)
  http://www.samsung.com/monitor (U.S.A)
  http://www.sec.co.kr/monitor (Korea)
  http://www.samsungmonitor.com.cn/ (China)

Windows ME

1. Insert CD into the CD-ROM drive.
2. Click **"Windows ME Driver"**.
3. Choose your monitor model in the model list, then click the **"OK"** button.


Samsung Monitor Setup for Windows ME/98/95
Pick the display adapter which you want to install the monitor
S3 Inc. Savage4
Pick the monitor which you want to install
SyncMaster 703DFX/753DFX
SyncMaster 753DF[X]/703DF[X]/783DF[X], MagicSyncMaster
SyncMaster 755DF[X]
Cancel
OK

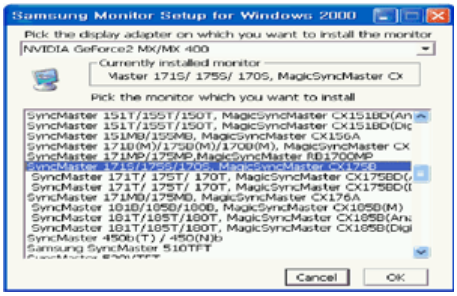
4. Click the **"Install"** button in the **"Warning"** window.


Warning: Select the monitor name that exactly matches the name printed on the front of your monitor or on the back label. If you select the wrong monitor, restart Windows in the "Safe Mode" and use this CD-ROM again to select the correct monitor.
Cancel
Install

5. Monitor driver installation is completed.

Windows XP/2000

1. Insert CD into the CD-ROM drive.
2. Click **"Windows XP/2000 Driver"**
3. Choose your monitor model in the model list, then click the **"OK"** button.


Samsung Monitor Setup for Windows 2000
Pick the display adapter on which you want to install the monitor
NVIDIA GeForce2 MX/MX 400
Currently installed monitor
Master 171S/ 175S/ 170S, MagicSyncMaster CX
Pick the monitor which you want to install
Cancel
OK

4. If you can see following message window, then click the **"Continue Anyway"** button. Then click **"OK"** button.

Hardware Installation
The software you are installing for this hardware:
SyncMaster 171S/ 175S/ 170S, MagicSyncMaster CX175S
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

This monitor driver is under certified MS logo,and this installation doesn't damage your system.The certified driver will be posted on Samsung Monitor homepage.
http://www.samsung.com/.

5. Monitor driver installation is completed.

Installing the Monitor Driver (Manual)

Windows XP | Windows 2000 |Windows Me |Windows NT | Linux

When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.

Prepare a blank disk and download the driver program file at the Internet web site shown here.

- Internet web site : http://www.samsung.com/ (Worldwide)
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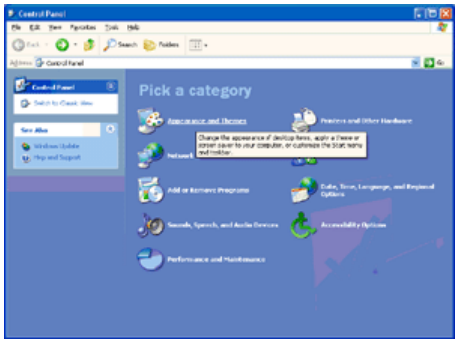
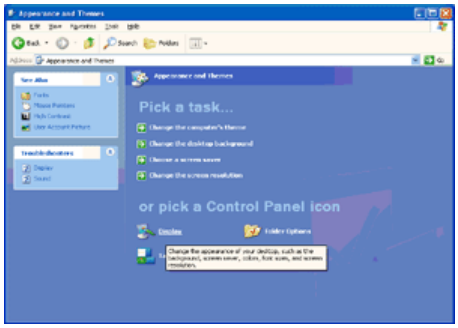
  http://www.sec.co.kr/monitor (Korea)
  http://www.samsungmonitor.com.cn/ (China)

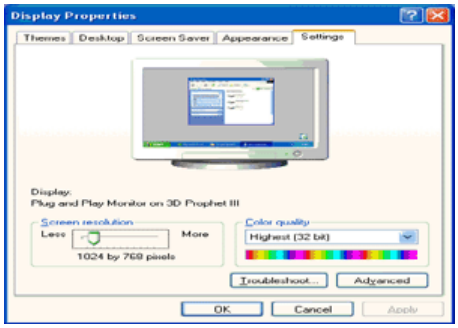
Microsoft® Windows® XP Operating System

1. Insert CD into the CD-ROM driver.
2. Click "**Start**" —> "**Control Panel**" then click the "**Appearance and Themes**" icon.

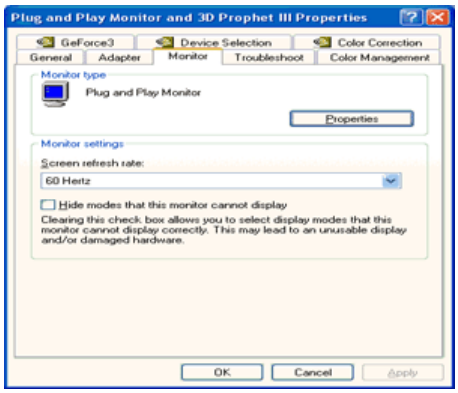


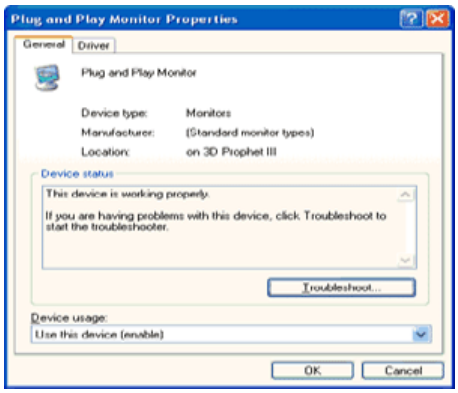
3. Click "**Display**" icon and choose the "**Settings**" tab then click "**Advanced..**".



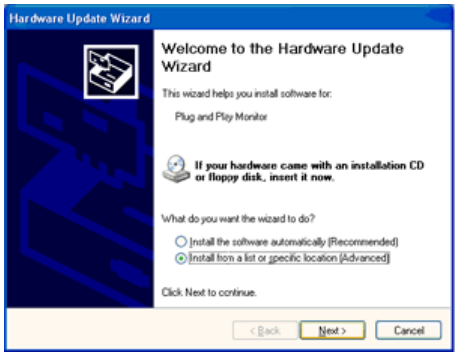


4. Click the "**Properties**" button on the "**Monitor**" tab and select "**Driver**" tab.

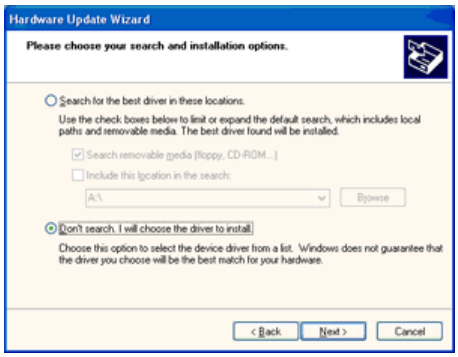


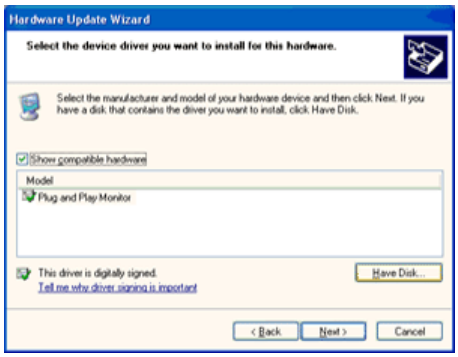


5. Click "**Update Driver..**" and select "**Install from a list or..**" then click "**Next**" button.

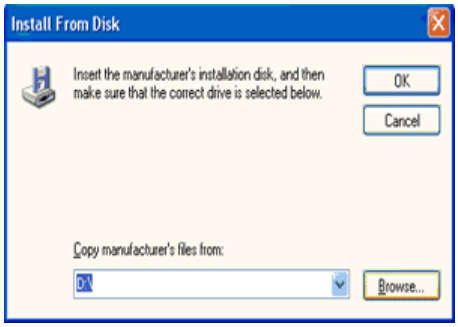

Hardware Update Wizard
Welcome to the Hardware Update Wizard
This wizard helps you install software for:
Plug and Play Monitor
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

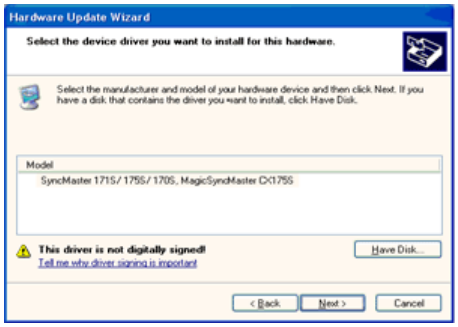
6. Select "**Don't search ,I will..**" then click "**Next**" and then click "**Have disk**".


Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
A:\
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

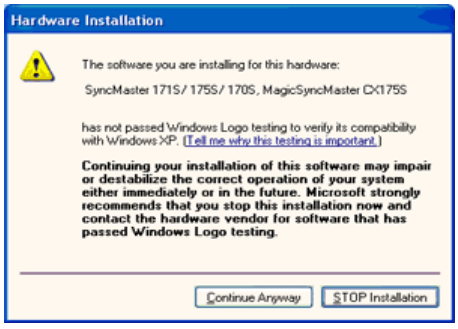

Hardware Update Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model
Plug and Play Monitor
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
< Back
Next >
Cancel

7. Click the "**Browse**" button then choose A:(D:\Driver) and choose your monitor model in the model list and click the "**Next**" button.




Hardware Update Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Model
SyncMaster 171S/ 175S/ 170S, MagicSyncMaster CX175S
This driver is not digitally signed!
Tell me why driver signing is important
Have Disk...
< Back
Next >
Cancel

8. If you can see following message window, then click the "**Continue Anyway**" button. Then click "**OK**" button.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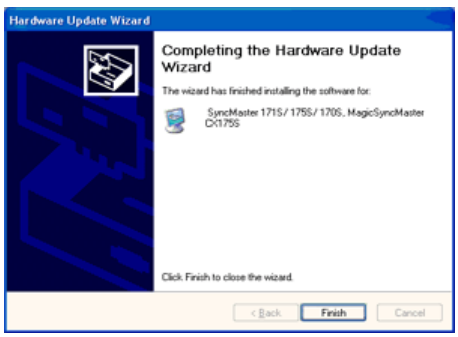
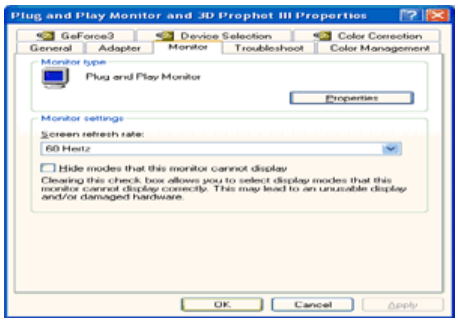
SyncMaster 171S/ 175S/ 170S, MagicSyncMaster CX175S
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

This monitor driver is under certified MS logo,and this installation doesn't damage your system.The certified driver will be posted on Samsung Monitor homepage.
http://www.samsung.com/

9. Click the "**Close**" button then click "**OK**" button continually.


Hardware Update Wizard
Completing the Hardware Update Wizard
The wizard has finished installing the software for:
SyncMaster 171S/ 175S/ 170S, MagicSyncMaster CX175S
Click Finish to close the wizard.
< Back
Finish
Cancel

SyncMaster 171S/ 175S/ 170S, MagicSyncMaster CX...
General
Driver
SyncMaster 171S/ 175S/ 170S, MagicSyncMaster CX175S
Driver Provider: Samsung
Driver Date: 9/11/2001
Driver Version: 1.0.0.0
Digital Signer: Not digitally signed
Driver Details...
To view details about the driver files.
Update Driver...
To update the driver for this device.
Roll Back Driver
If the device fails after updating the driver, roll back to the previously installed driver.
Uninstall
To uninstall the driver (Advanced).
Close
Cancel


10. Monitor driver installation is completed.

Microsoft® Windows® 2000 Operating System

When you can see "Digital Signature Not Found" on your monitor, follow these steps.

1. Choose "**OK**" button on the "**Insert disk**" window.
2. Click the "**Browse**" button on the "**File Needed**" window.
3. Choose A:(D:\Driver) then click the "Open" button and then click "**OK**" button.

How to install

1. Click "**Start**" , "**Setting**" , "**Control Panel**".
2. Double click the "**Display**" Icon.
3. Choose the "**Settings**" tab and then click "**Advanced..**".
4. Choose "**Monitor**".
   Case1: If the "Properties" button is inactive, it means your monitor is properly configured. Please stop installation
   Case2: If the "Properties" button is active, click the "Properties" button then follow next steps continually.
5. Click "**Driver**" and then click on "**Update Driver..**" then click on the "Next" button.
6. Choose "**Display a list of the known drivers for this device so that I can choose a specific driver**" then click "**Next**" and then click "**Have disk**".
7. Click the "**Browse**" button then choose A:(D:\Driver).
8. Click the "**Open**" button, then click "**OK**" button.
9. Choose your monitor model and click the "**Next**" button then click "**Next**" button.
10. Click the "**Finish**" button then the "**Close**" button.

    If you can see the "**Digital Signature Not Found**" window then click the "**Yes**"button.
    And click the "**Finish**" button then the "**Close**" button.

Microsoft® Windows® Millennium Operating System

1. Click "**Start**" , "**Setting**" , "**Control Panel**".
2. Double click "**Display**" icon.
3. Select the "**Settings**" tab and click "**Advanced Properties**" button.
4. Select the "**Monitor**" tab.
5. Click the "**Change**" button in the "**Monitor Type**" area.
6. Choose "**Specify the location of the driver**".
7. Choose "**Display a list of all the driver in a specific location..**" then click "**Next**" button.
8. Click the "**Have Disk**" button
9. Specify A:\(D:\driver) then click "**OK**" button.
10. Select "**Show all devices**" and choose the monitor that corresponds to the one you connected to your computer and click "**OK**".
11. Continue choosing "**Close**" button and "**OK**" button until you close the Display Properties dialogue box.

Microsoft® Windows® NT Operating System

1. Click **Start**, **Settings**, **Control Panel**, and then double-click **Display** icon.
2. In Display Registration Information window, click Settings Tab and then click **All Display Modes**.
3. Select a mode that you wish to use (Resolution, Number of colors and Vertical frequency) and then click **OK**.
4. Click **Apply** button if you see the screen working normally after clicking **Test**. If the screen is not normal, change to a different mode (lower mode of resolution, colors or frequency).

   If there is no Mode at **All Display Modes**, select the level of resolution and vertical

frequency by referring to the Preset Timing Modes in the user guide.

Linux Operating System

To execute X-Window, you need to make the X86Config file, which is a type of system setting file.

1. Press Enter at the first and the second screen after executing the X86Config file.
2. The third screen is for **setting your mouse**.
3. Set a mouse for your computer.
4. The next screen is for **selecting a keyboard**.
5. Set a keyboard for your computer.
6. The next screen is for **setting your monitor**.
7. First of all, set a **horizontal frequency** for your monitor. (You can enter the frequency directly.)
8. Set a **vertical frequency** for your monitor. (You can enter the frequency directly.)
9. Enter the **model name of your monitor**. This information will not affect the actual execution of X-Window.
10. You have **finished** setting up your monitor.
    Execute X-Window after setting other requested hardware.

Natural Color

Natural Color Software Program

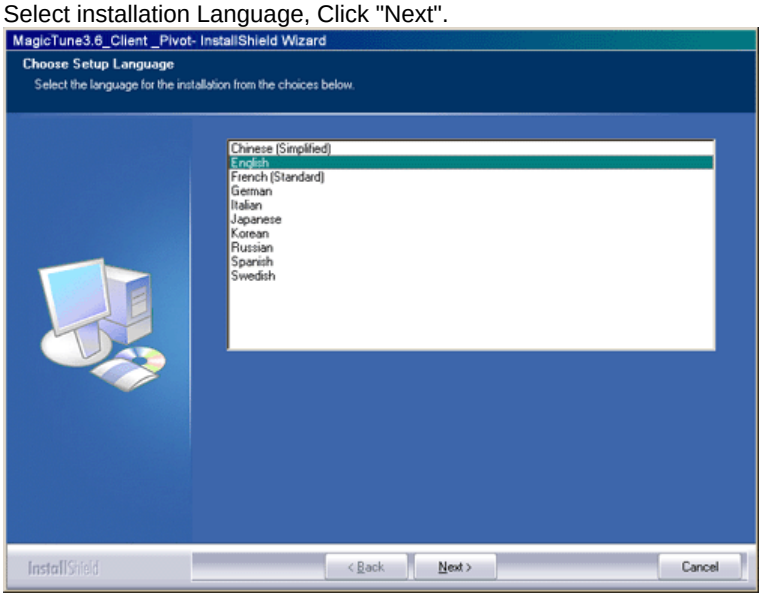
One of the recent problems in using a computer is that the color of the images printed out by a printer or other images scanned by a scanner or a digital camera are not the same as those shown on the monitor.
The Natural Color S/W is the very solution for this problem. It is a color administration system developed by Samsung Electronics in association with Korea Electronics & Telecommunications Research Institute (ETRI).
This system is available only for Samsung monitors and makes the color of the images on the monitor the same as the printed or scanned images.
For more information, refer to Help (F1) in the software program.

How to install the Natural Color software
Insert the CD included with the Samsung monitor into the CD-ROM Drive. Then, the initial screen of the program Natural Color will be executed. Click Natural Color on the initial screen to install the Natural Color software.
To install the program manually, insert the CD included with the Samsung monitor into the CD-ROM Drive, click the [Start] button of Windows and then select [Execute].
Enter D:\color\eng\setup.exe and then press the <Enter> key.
(If the drive where the CD is inserted is not D:\, enter the applicable drive.)

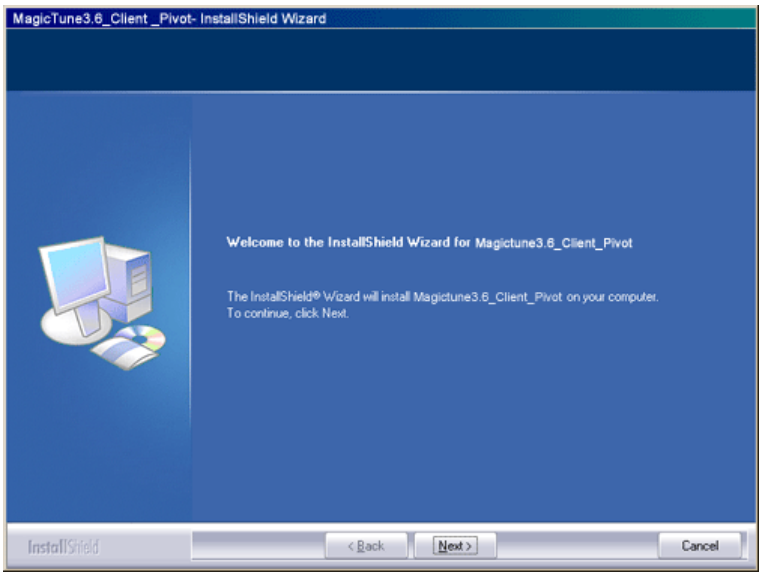
How to delete the Natural Color software program
Select **"Setting/Control Panel"** on the **"Start"** menu and then double-click **"Add/Delete a program"**.
Select Natural Color from the list and then click the **"Add/Delete"** button.

Installation

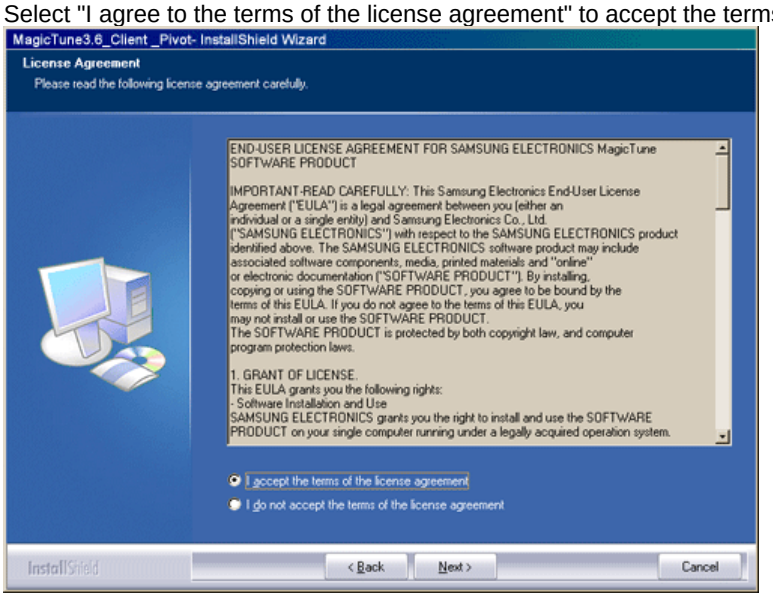
1. Insert the installation CD into the CD-ROM drive.
2. Click the AutoRotation installation file.
3. Select installation Language, Click "Next".



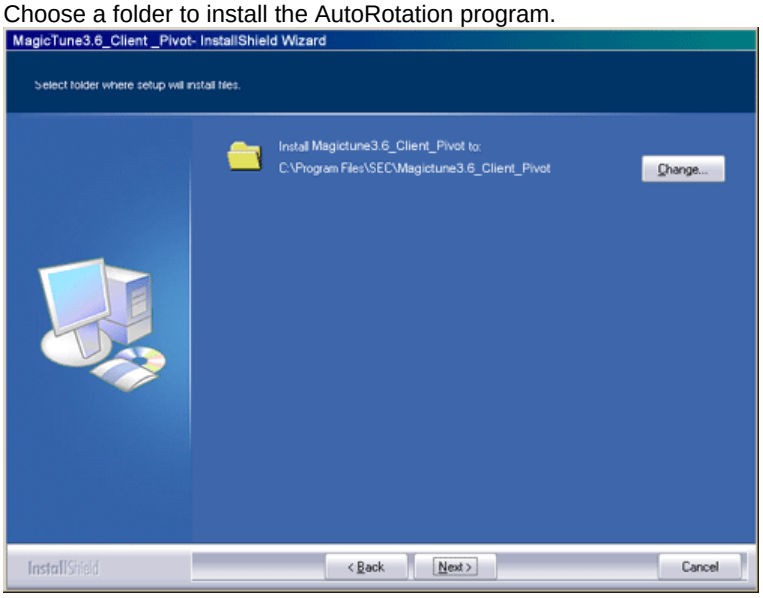
4. When the Installation Shield Wizard window appears, click "Next."


MagicTune3.6_Client _Pivot- InstallShield Wizard
Welcome to the InstallShield Wizard for Magictune3.6_Client_Pivot
The InstallShield® Wizard will install Magictune3.6_Client_Pivot on your computer.
To continue, click Next.
InstallShield
< Back
Next >
Cancel

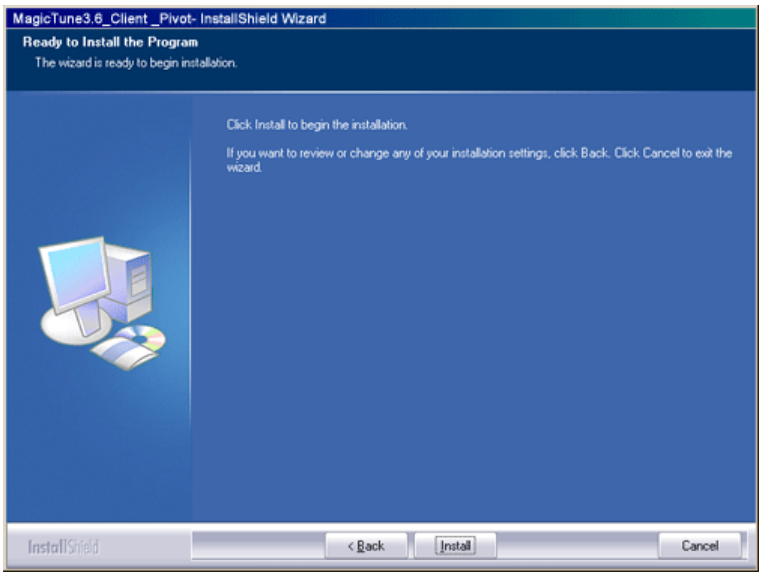
5. Select "I agree to the terms of the license agreement" to accept the terms of use.


MagicTune3.6_Client _Pivot- InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
END-USER LICENSE AGREEMENT FOR SAMSUNG ELECTRONICS MagicTune SOFTWARE PRODUCT
IMPORTANT-READ CAREFULLY: This Samsung Electronics End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and Samsung Electronics Co., Ltd. ("SAMSUNG ELECTRONICS") with respect to the SAMSUNG ELECTRONICS product identified above. The SAMSUNG ELECTRONICS software product may include associated software components, media, printed materials and "online" or electronic documentation ("SOFTWARE PRODUCT"). By installing, copying or using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, you may not install or use the SOFTWARE PRODUCT.
The SOFTWARE PRODUCT is protected by both copyright law, and computer program protection laws.
1. GRANT OF LICENSE.
This EULA grants you the following rights:
- Software Installation and Use
SAMSUNG ELECTRONICS grants you the right to install and use the SOFTWARE PRODUCT on your single computer running under a legally acquired operation system.
I accept the terms of the license agreement
I do not accept the terms of the license agreement
InstallShield
< Back
Next >
Cancel

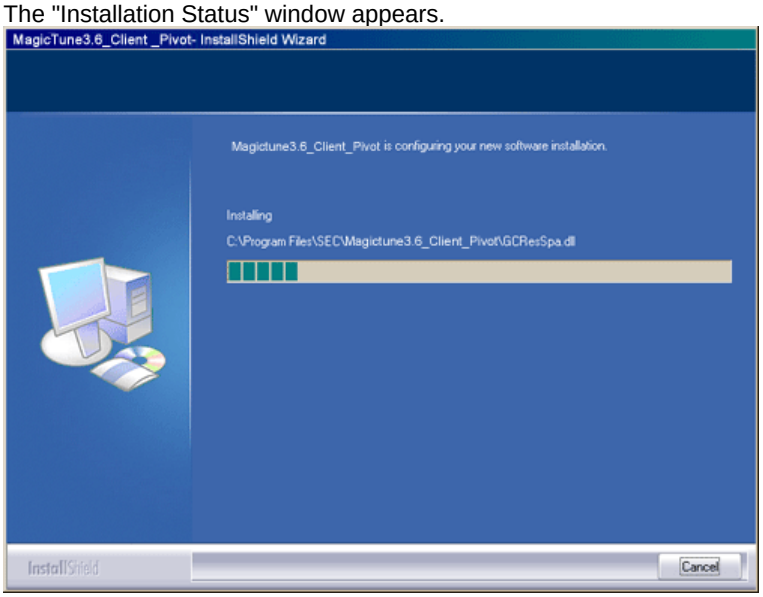
6. Choose a folder to install the AutoRotation program.



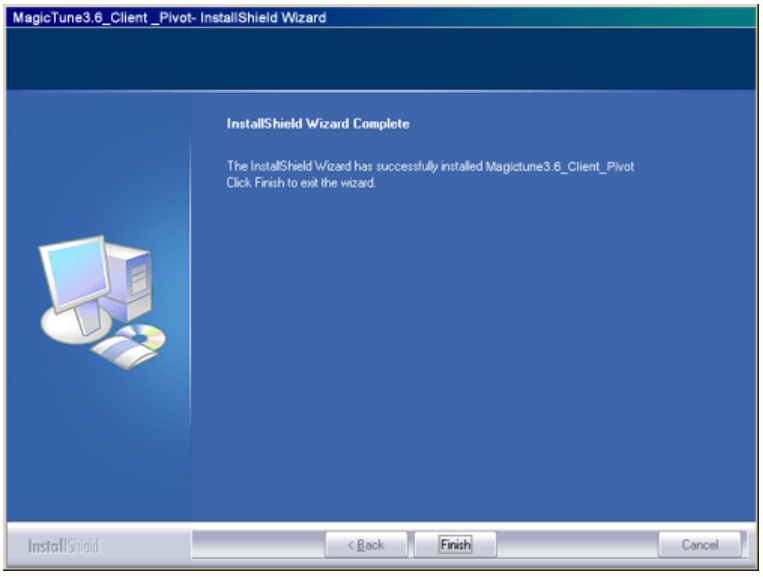
7. Click "Install."


MagicTune3.6_Client _Pivot- InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

8. The "Installation Status" window appears.



9. Click "Finish."



10. When the installation is complete, the MagicRotation, MagicTune™ executable icon appears on your desktop.

Double-click the icon to start the program.

MagicTune™ execution icon may not appear depending on specification of computer system or monitor.
If that happens, press F5 Key.

Installation Problems (MagicTune™)

The installation of MagicTune™ can be affected by such factors as the video card, motherboard and the network environment.
See "Troubleshooting" if you have trouble during installation.

System Requirements

OS

- Windows™ 98 SE
- Windows™ Me
- Windows™ 2000
- Windows™ XP Home Edition
- Windows™ XP Professional

It is recommended using MagicTune™ in Windows™ 2000 or later.

Hardware

- 32MB Memory above
- 25MB Hard disk space above

* For more information, visit the MagicTune™ website.

Installation Problems (MagicRotation)

The installation of MagicRotation can be affected by such factors as the video card, motherboard and the network environment.
See "Troubleshooting" if you have trouble during installation.

Limitation

1. The "Display Driver" should be properly loaded for the MagicRotation to work properly.
   The installed "Display Driver" should be the latest driver supplied by the vendor.

2. If some applications like Windows™ Media Player, Real Player, etc. are not displaying movie files properly in 90, 180 and 270 orientations then do the following :
   - Close the application.
   - Select the Orientation (90, 180, 270) you want to view the application.
   - Relaunch the application.

   In most cases this should fix the problem.

3. User Applications using OpenGL and DirectDraw (3D drawing) will not function as per the orientation mode selected (90, 180, 270).
   e.g. 3D games

4. DOS based applications in Full Screen Mode will not function as per the orientation mode selected (90, 180, 270).

5. Dual is not supported in Windows™ 98, ME, NT 4.0.

6. MagicRotation does not provide support for 24 bits per pixel (Bit depth/Color Quality).

7. If you are changing your Graphic Card it is recommended that you uninstall the MagicRotation Software before doing so.

System Requirements

OS

- Windows™ 98 SE
- Windows™ Me
- Windows™ NT 4.0
- Windows™ 2000
- Windows™ XP Home Edition
- Windows™ XP Professional

Hardware

- 128MB Memory above(recommended)
- 25MB Free Hard disk space above

Service Packs

- It is recommended that your System has the latest Service Pack installed.
- For Windows™ NT 4.0, it is recommended to install Internet Explorer 5.0 and above with Active Desktop component.

* For more information, visit the MagicRotation website.

* Windows™ is registered trademark of Microsoft Corporation,Inc.

Uninstall

The AutoRotation program can be removed only by using the "Add or Remove Programs" option of the Windows™ Control Panel.

Perform the following steps remove AutoRotation.

1. Go to [Task Tray] ' [Start] ' [Settings] and select [Control Panel] in the menu. If the program runs on Windows™ XP, go to [Control Panel] in the [Start] menu.

2. Click the "Add or Remove Programs" icon in Control Panel.

3. In the "Add or Remove Programs" screen, scroll down to find "AutoRotation". Click on it to highlight it.

4. Click the "Change/Remove" button to remove the program.

5. Click "Yes" to begin the uninstall process.

6. Wait until the "Uninstall Complete" dialog box appears.

Visit the AutoRotation website for technical support for AutoRotation, FAQs (questions and answers) and software upgrades.

MagicTune™ | MagicRotation

MagicTune™ HELP

Overview

What is MagicTune™?

Monitor performance can vary due to the graphics card, host computer lighting conditions and other environmental factors. In order to get the best image on a monitor requires you to adjust it for your unique setting. Unfortunately, the manual controls available to tune the image often prove to be challenging. Proper adjustment (tuning) requires an easy to use program that goes through a step-by-step process to obtain the best overall picture quality.

In most cases even simple adjustments to Brightness, or Contrast require navigation of the multi-level, on-screen display (OSD) menus that are not easy to understand. Furthermore, there is no feedback to assist in correctly setting the controls of the monitor. MagicTune™ is a software utility that guides you through the tuning process with easy to understand instructions and back ground patterns designed for each monitor control. The display settings for each user can be saved, providing an easy way to select display characteristics in a multi-user environme or having a single user have multiple defined presets based on content and ambient lighting.

Basic Functionality

MagicTune™ is a software utility that allows monitor adjustment and color tuning using the Display Data Channel Command Interface (DDC/CI) protocol. All adjustments to the display are controlled via software to eliminate the need to use the monitor on-screen display (OSD). MagicTune™ supports Windows™ 98 SE, Me, 2000, XP Home, and XP Professional.
It is recommended using MagicTune™ in Windows™ 2000 or later.

MagicTune™ allows for quick accurate tuning of the display with the ability to easily save and use monitor configurations that are best suited for you.

OSD Mode

The OSD mode allows easy adjustment of monitor settings without taking pre-defined steps. You can access the desired menu item to set with ease.

MagicTune™ allows for quick accurate tuning of the display with the ability to easily save and use monitor configurations that are best suited for you.

- **OSD mode may appear inconsistent with the explanation in guidance book depending on specification of each monitor.**
- **When Pivot is functioning, part of MagicTune™ Program may not operate normally.**
- **AutoRotation : AutoRotation will automatically pivots the monitor to 0, 90, 180degrees when you pivots the monitor.**

To execute Rotation, it should be done as below.

- Please install both of Rotation program and MagicTune™ 3.6 in your PC.
- Launch MagicTune™ 3.6
- **Option** → **Preference** → click the small box as "V" in **enable task tray menu**.

- MagicTune™ control mode will be different according to monitor models.
- The permitted angle of rotation of the monitor is determined by the model of the monitor.

OSD Mode

The OSD mode makes the adjustment of settings on all monitors easy. When selected , each tab on top of the control window displays the general descriptions of the sub-menu items for adjustment.
When selected, each tab displays a list of menus. For quick adjustment of the monitor settings, the OSD mode allows easy and convenient access to all tabs and sub-menu items.

Button Tab Definition

OK	Applies any changes made and exits MagicTune™.
Reset	Restores the display settings to the factory settings.
Cancel	Exits MagicTune™ without applying the changes made. If you have not made any changes in the control window, clicking "Cancel" does not cause any actions.

Picture Tab Definition

Allows the user to adjust the screen settings to the desired values.

Brightness	Makes the entire screen brighter or darker. The detailed data of the images in the dark areas can be lost if the brightness is not adjusted to the proper level. Adjust the brightness for best viewing conditions.
Contrast	Adjusts the difference in brightness between the bright and dark areas on screen. Determines the crispness of the images.

Resolution	Lists all display resolutions supported by the program.
MagicBright™	MagicBright™ is a new feature providing the optimum viewing environment depending on the contents of the image you are watching. Currently four different modes are available: Text, Internet,Game, Sport, Movie and Custom. Each mode has its own pre-configured brightness value. You can easily select one of six settings by simply pressing MagicBright control buttons. 1. Text: For documentations or works involving heavy text. 2. Internet: For working with a mixture of images such as text and graphics. 3. Game : For watching motion pictures such as a Game. 4. Sport : For watching motion pictures such as a Sport. 5. Movie: For watching motion pictures such as a DVD or Video CD. 6. Custom: Although the values are carefully chosen by our engineers, the pre-configured values may not be comfortable to your eyes depending on your taste. If this is the case, adjust the Brightness and Contrast by using the OSD menu. MagicBright control mode will be different according to monitor models. Some monitor will only support Four modes(Text, Internet, Entertain, Custom)

Color Tab Definition

Adjusts the "warmth" of the monitor background or image color.

MagicColor and Gamma will be shown only in the monitor that supports these functions.

Color Tone	The tone of the color can be changed. • Warm2 - Warm1 - Cool 1 - Cool 2 - Cool 3 - Cool 4 - Cool 5 - Cool 6 - Cool 7 • Off Color Tone mode will be different according to monitor models. Some monitor will only support Four modes(Warm, Normal, Cool, Custom)
Color Control	Adjusts of the monitor image color. You can change the monitor color to your desired color. • R- G - B
Calibration	The process through which the colors of your choice are optimized and maintained. You will find MagicTune™ extremely useful if you are one of those who wish to view images with their full details accurately reproduced - including web images and ones produced by a digital camera or scanner.
	MagicColor is a new technology that Samsung has exclusively developed to improve digital image and to display natural color more clearly without disturbing image quality.

MagicColor

1. OFF : Returns to the original mode.
2. DEMO : The screen before applying MagicColor appears on the right and the screen after applying MagicColor appears on the left.
3. Full : Displays not only vivid natural color but also more realistic natural skin color with clearness.
4. Intelligent : Displays vivid natural color with clearness.
5. MagicZone
   - The MagicZone ensures the clear and sharp display of animated multimedia or photo images by enhancing the brightness, sharpness, saturation, Hue of a certain area on the screen. This offers an easy-to-use interface that highlights the video-playing portion of your multimedia program by automatically detecting and highlight the desired area by dragging.
   - When the mouse cursor is activated( )and it is necessary to de-activate it to use it for other tasks, right click your mouse, or put the activated cursor ( )on the taskbar and click. When de-activated, the icon on the screen changes back to the one shown before activation.
   - Especially, MagicZone is appropriate to using the moving picture.
   - **Auto Detect** : If you run the Movie in some players, MagicZone will automatically get the play screen highlighted (it will be supported in players of Gom, Adrenalin, KCP, Window Media, and Power DVD etc.,)Some other players also can be highlighted but could have some problems.

   - Tusk menu

HUE	Adjust the tint of the color.
Saturation	Adjusts the color saturation.
Brightness	Adjusts the Brightness.
Sharpness	Adjusts the difference between the lightest and darkest areas of the display.
Zone Off	Turn off the zone that you have captured.
Reset	Returns to the the default setting that vendor has set.

- Depending on the monitor models **Color Control, Sharpness, Contrast, Color Tone, Brightness** will not be adjustable in **MagicColor** mode of **Full** and **Intelligent**.
- MagicTune™ will be disappear if you excute MagicZone, and closing the MagicZone after adjusting, will show the MagicTune™ again.
  (System Tray is Unhecked)
  MagicTune™ will be disappear if you excute MagicZone, and closing the MagicZone after adjusting. will not show MagicTune™ again.
  (System Tray is Checked)
- MagicColor mode will be different according to monitor models.
  MagicZone mode will show if the monitor supports the function.

Gamma

Gamma correction changes the luminance of the colors with intermediate luminance.

Gamma mode will be different according to monitor models. Some monitor will only support Three modes(Mode1, Mode2, Mode3)

Image Tab Definition

Adjusts the Fine , Coarse and Position values.

Image Setup	• Fine : Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed). • Coarse : Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the center using the Horizontal Control menu. • Auto Setup : Auto adjustment allows the monitor to self-adjust to the incoming video signal. The values of fine, coarse and position are adjusted automatically.
Position	Adjusts the screen location horizontally and vertically.
Sharpness	Changes the clearance of image.

Option Tab Definition

You can configure MagicTune™ using the following options.

Preferences	Loads the Preferences Dialog Box. Preferences in use will have an "V" in the check box. To turn on or off any Preference, position the cursor over the box and click. • Enable task tray menu . - To access the MagicTune™ menus, click the icon on the [task tray menu]. The menus are not displayed if the [Enable System Tray] is deselected in [Options] ' [Basic Settings]. • Select Language - The language chosen affects only the language of the OSD.
Source Select	• Analog • Digital

Support Tab Definition

Shows the Asset ID and the version number of the program, and allows you to use the Help feature.

Help	Visit the MagicTune™ website or click to open the Help files (User Manual) if you need any help installing or running MagicTune™. The User Manual opens within a basic browser window.
Asset ID	you can use the server to control the Client monitor. (Server program should be installed to use this program as Client)
User Name	Shows the user name that is registered in PC.

	User ID	Shows the user ID that is register in PC.
	Server IP	Write down the server IP .
	Department	Write down the department.
	Location	Write down the location.
Version	Displays the version of MagicTune™.	

Color Calibration

Color Calibration

Color Calibration guides you to get optimal color condition for your monitor.

Proceed following 5steps for getting optimal monitor color condition .

1. Control "Brightness control bar" for matching the brightness of control patch and the brightness of background pattern
2. When you detect specific color tone on "Control patch", move the control cursor toward to the direction of the color tone referring to "Color reference Circle".
   => Adjustment is finished properly, you won't detect any color tone on Control patch.
3. When you finish adjustment for step1,Click "Next" button .
4. Repeat 1), 2), 3) procedures for remaining step2 ~ step5.
5. You can easily view the calibration effect through clicking "Preview " button!

How multiple users can use adjusted color values

Definition
When monitor is used by multiple users, color values which are adjusted via Color calibration for each users can be saved and used. Up to 5 users can use the saved color values.

1. How to save adjusted color values:
   Press Next to make it change into Apply and then you can save adjusted color values.
   As many as 5 values can be saved.
2. How to apply the saved color values:
   Press Multi User button on main screen to select and use one of the saved color values.

Preview

Press "Preview" button on the Color Calibration.
The above picture will be shown.

1. Press "View Calibrated" button to see the calibration effect which you adjusted.
2. Press "View Uncalibrated" button to see the original image.

Troubleshooting

The current computing system is not compatible with MagicTune™.
Please press OK and click on the "Shortcut to the MagicTune™ site" to view our home page for further reference.

An error may occur when your video/graphic card is not in the 'Available' list.
(The latest or oldest video cards may not be compatible.)

Please visit our homepage to see the Troubleshooting section.

An error may occur if the card maker has modified the video card driver or the graphics chip even when the video card is in the list.

Please visit our homepage to see the Troubleshooting section.

Check if your monitor is manufactured by Samsung.
Products from other manufacturers may cause errors.

Only Samsung products are able to support this feature.

An error may occur even when your monitor is manufactured by Samsung but is out of date. Check if your monitor is able to support MagicTune™.

This feature is only supported by those monitors that are registered on our homepage.
Check for the monitor before purchasing it as out-of-date models are not supported.

An error occurs when no information on EDID (Extended Display Identification Data) exists for the current monitor.
This happens when from your desktop, Start → Setup → Control Panel → System → Hardware → Device Manager → Monitor is selected, the current "Plug-and-play monitor" is removed and new hardware is searched for but the system couldn't find any "Plug-and-play monitor".

Please visit our homepage to see the Troubleshooting section.

An error occurs when replacing the monitor with a new one when the system power is off but the system has not been restarted.

Please restart the system each time the monitor is replaced before using MagicTune™.

An error occurs when the video card driver is not installed properly.
This happens when the current video card list is not displayed normally. You can check this via Start → Setup → System → Hardware → Device Manager → Display Adapter.

Visit the video card maker's homepage and download and install the latest driver.
For more information about the video card, contact the card manufacturer.

To ensure normal operation, please restart your system.

An error occurs when the system is not restarted after installing MagicTune™.
(This is for Win98SE and WinMe only.)

Restart the system before use.

For the best performance of MagicTune™, adjust to the optimal resolution.
Refer to the User Guide for the optimal resolution.

If you do not adjust to the optimal resolution and perform Color Calibration, the monitor cannot be adjusted to the optimal condition.

Refer to the manual for the optimal resolution.

This video card does not support MagicTune™.
Please install a new video card driver.

An error occurs when the video card driver is not installed properly.
This happens when the current video card list is not displayed normally. You can check this from Start → Setup → System → Hardware → Device Manager → Display Adapter.

Visit the video card manufacturer's homepage and download and install the latest driver.
For more information about the video card, contact the card manufacturer.

As the Highlight program uses the communication lines,
please exit the Highlight program before you can access MagicTune™.

Some of Samsung CDT monitors support the Highlight feature.
When using both the Highlight feature and MagicTune™ simultaneously, conflicts occur, which cause errors.

Make sure to turn OFF Highlight before using MagicTune™.

Troubleshooting

- MagicTune™ may not work in case monitor is replaced or driver of graphic card is updated while MagicTune™ is operating. If so, please restart the system.

Symptom	Check List	Solutions
Check when MagicTune™ does	MagicTune™ feature is found only on PC	* To check whether your PC is available for MagicTune™ feature, follow the

not function properly.	(VGA) with Window OS that supports Plug and Play.	steps below (When Windows™ is XP); Control Panel → Performance and Maintenance → System → Hardware → Device Manager → Monitors → After deleting Plug and Play monitor, find 'Plug and Play monitor' by searching new Hardware. MagicTune™ is an additional software for the monitor. Some graphic cards may not support your monitor. When you have a problem with the graphic card, visit our website to check the compatible graphic card list provided. http://www.samsung.com/monitor/magicTune
MagicTune™ doesn't work properly.	Have you changed your PC or video graphic card?	Download the latest program. The program can be downloaded http://www.samsung.com/monitor/magicTune

- Visit the MagicTune™ website for technical support for MagicTune™, FAQs (questions and answers) and software upgrades.
- Visit the MagicTune™ website and download the installation software for MagicTune™ MAC.

The MagicTune™ program is an additional program for monitor products.
Some computing systems that install either an older or the latest video driver are not compatible with MagicTune™.
Please visit the MagicTune™ Website for technical support for MagicTune™.

Specifications subject to change without notice.
MagicTune™ is a trademark of SAMSUNG ELECTRONICS CO., Inc.
Windows™ is a registered trademark of Microsoft Corp.
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MagicRotation Help

Overview

What is MagicRotation?

Traditionally, computer displays allowed the user to view only in landscape mode.
In today's information age, more users need to view documents, web pages, emails, etc. in there day to day life. These types of applications can be better viewed in portrait mode where the entire contents are available on the screen. This greatly improves the user's productivity allowing him the flexibility to switch between landscape and portrait modes.

The MagicRotation Software from Samsung Electronics, Inc. provides the user with a rotation feature (0, 90, 180, 270 orientation) that facilitates the optimum utilization of computer display screen, better viewing and improved user productivity.

Basic Function

MagicRotation will support Windows™ 98 SE, Me, NT 4.0, 2000, XP Home and XP Professional.

* Windows™ is registered trademark of Microsoft Corporation,Inc.

- **When Rotation is functioning, part of MagicTune™ Program may not operate normally.**
- **AutoRotation : AutoRotation will automatically AutoRotations the monitor to 0, 90, 180degrees when you AutoRotations the monitor.**

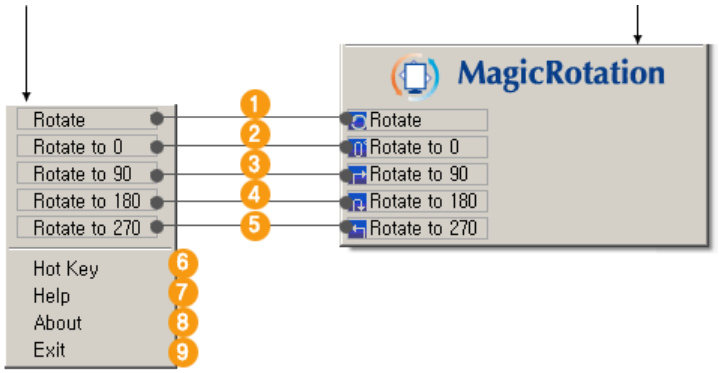
To execute AutoRotation, it should be done as below.

- Please install both of Rotation program and MagicTune™ 3.6 in your PC.
- Launch MagicTune™ 3.6
- **Option** → **Preference** → click the small box as "V" in **enable task tray menu**.

*** The angle of rotatation may vary depending on your monitor spec.**

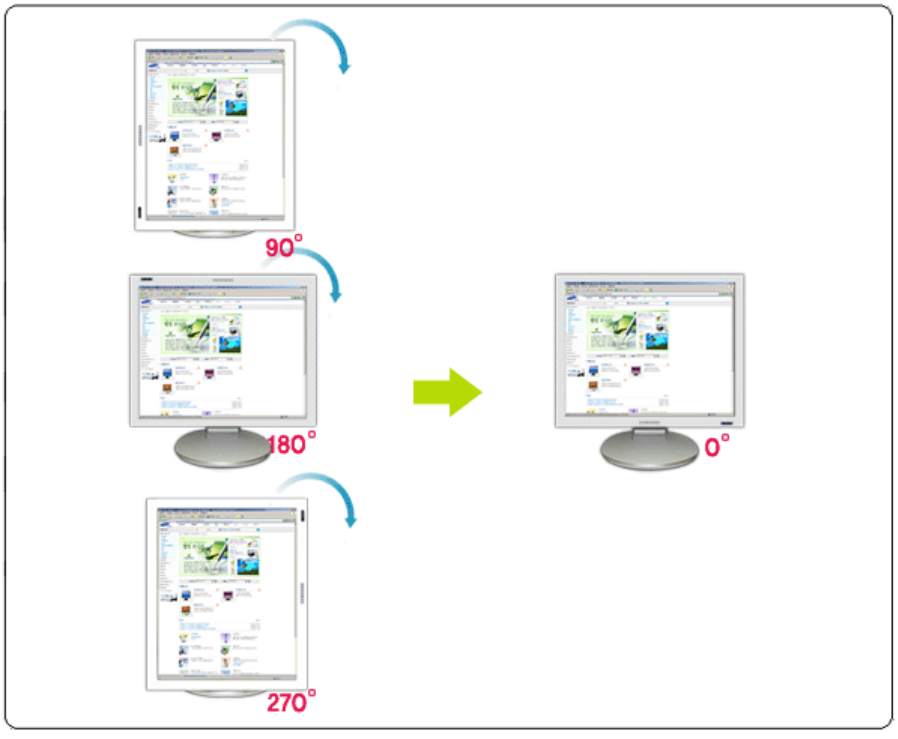
Interface

The Menu on task bar	Menu pop up at the mouse right button click.

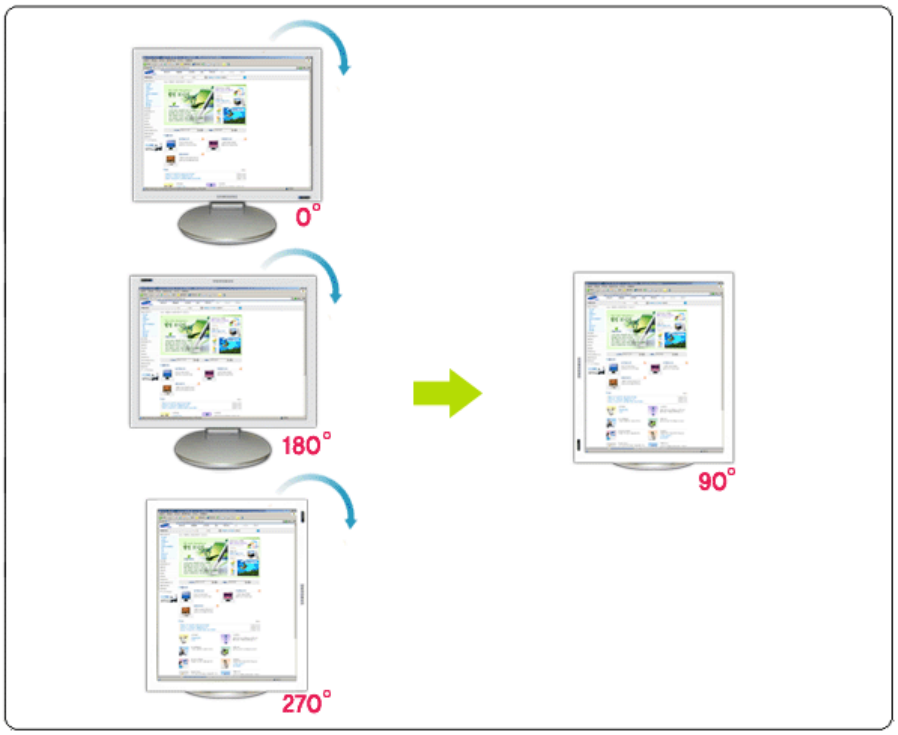


1 **Rotate** : Display will get rotated by the unit of 90 degree

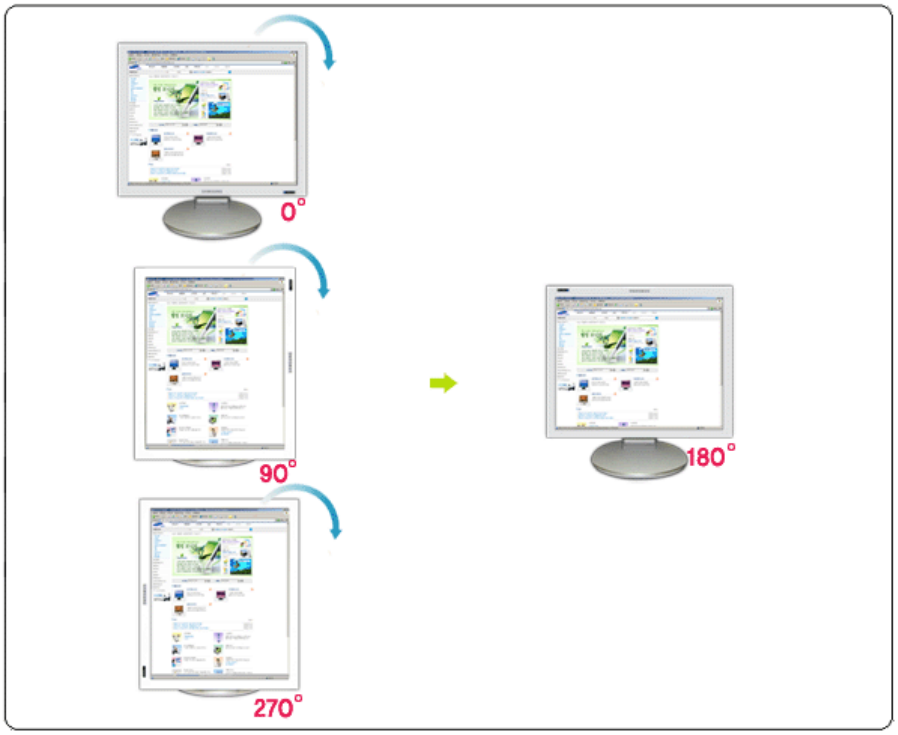
2 **Rotate to 0** : Display will get rotated to 0 degree from the current angle of rotation.



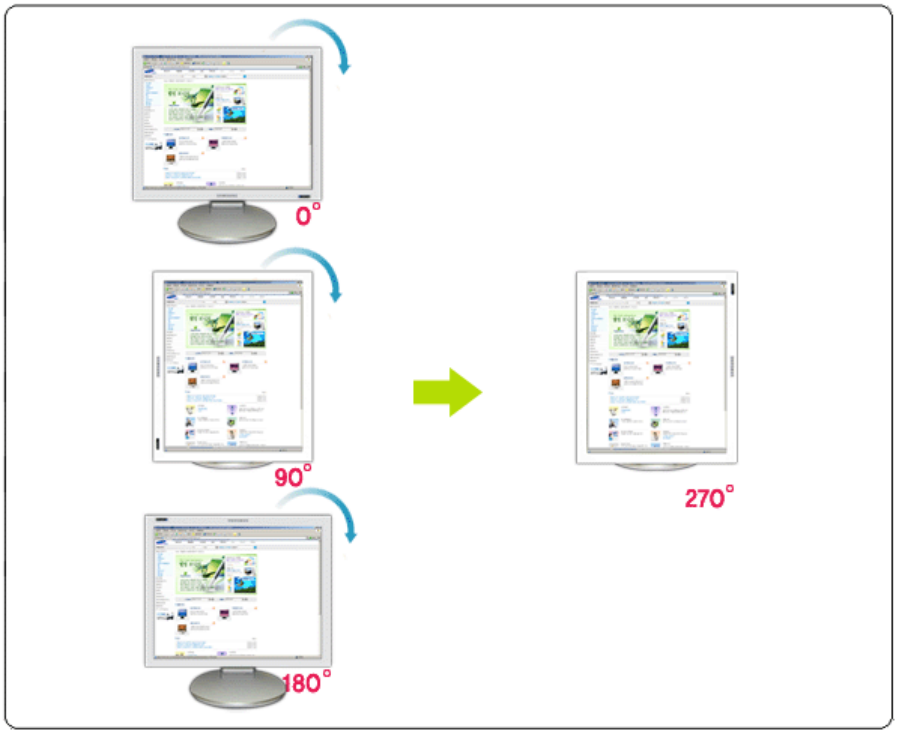
3 **Rotate to 90** : Display will get rotated to 90 degree from the current angle of rotation.



4 **Rotate to 180** : Display will get rotated to 180 degree from the current angle of rotation.



5 **Rotate to 270** : Display will get rotated to 270 degree from the current angle of rotation.



6 **Hot key** : Hot Keys are available by default and can be changed by user.
It can be assigned by user directly with keyboard after changing the existing HotKey.
User can create the hot key with the combination of Shift, Ctrl, Alt and general keys.
In case only general key is pressed, it will be assigned in the form of Alt+general key.

7 **Help** : It shows the HELP of MagicRotation program.

8 **About** : It shows the version and copyright of MagicRotation program.

9 **Exit** : It exits from MagicRotation program.

Troubleshooting

Before You Call Technical Support

- MagicRotation Software works with the installed "Display Driver" supplied by your Graphic Card Vendor to provide screen rotation capabilities. If the installed "Display Driver" is working incorrectly or has bugs in it, then these bugs would still exist even after MagicRotation Software is installed.
  Any incorrect/random behaviour resulting due to problems in the installed "Display Driver" are not due to MagicRotation Software.

  In order to verify if a problem exists in the installed "Display Driver" , you can perform the following diagonostic steps :

  1. Check if the problem is occuring in both 0 orientation (Landscape mode) and 90 orientation (Portarit mode).

2. Check if the problem occurs with different color depths (8/16/32 bits per pixel) and different resolution modes (800 x 600, 1024 x 768).
3. Check if the problem occurs without installing MagicRotation Software.

If the problem is repeating in any/all of the following scenarios then it may be the problem with your installed "Display Driver" :

In order to correct the problem you need to perform the following steps :

1. Uninstall MagicRotation Software.
2. Obtain the latest "Display Driver" from your Graphic Card Vendor.
   The latest "Display Driver" from (ATI, NVIDIA, MATROX, INTEL, etc.) are easily available for download from their respective websites.
3. Install the latest "Display Driver"
4. Install MagicRotation Software. In most of the cases this should correct the problem.

- MagicRotation may not work in case monitor is replaced or driver of graphic card is updated while MagicRotation is operating.
  If so, please restart the system.

- Visit the MagicRotation website for technical support for MagicRotation, FAQs (questions and answers) and software upgrades.

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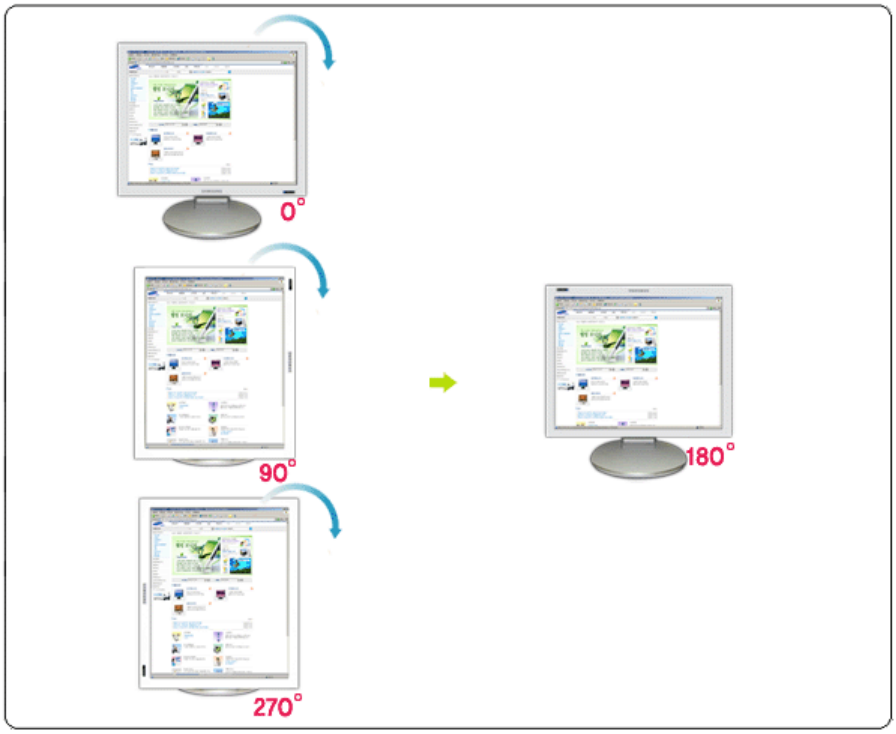

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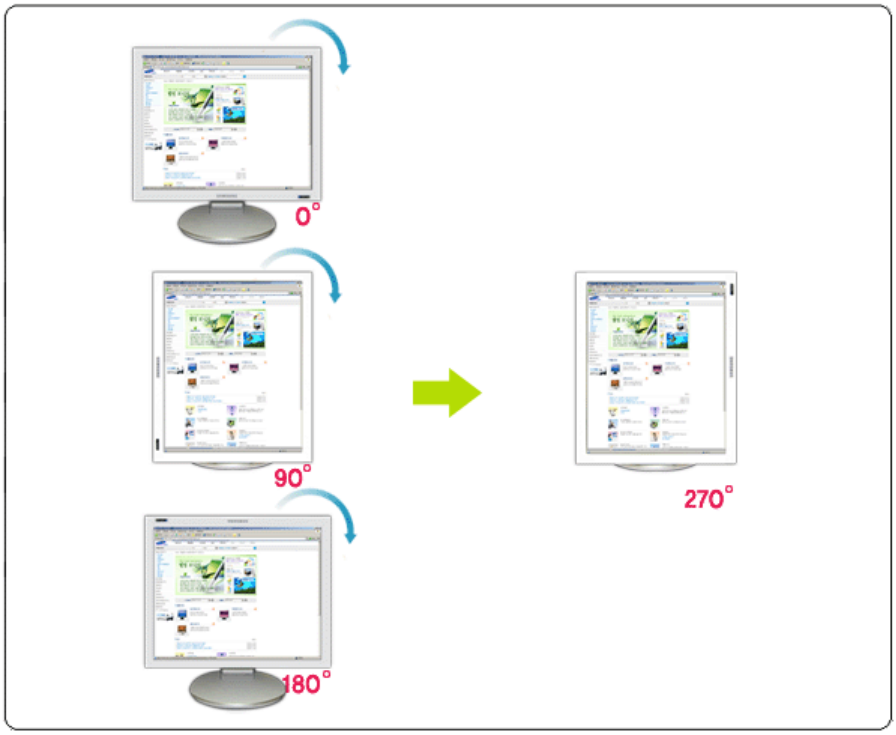

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Uninstall

The MagicRotation program can be removed only by using the "Add/Remove Programs" option of the Windows™ Control Panel.

Perform the following steps to remove MagicRotation.

1. Go to [Task Tray] ' [Start] ' [Settings] and select [Control Panel] in the menu.
   If the program runs on Windows™ XP, go to [Control Panel] in the [Start] menu.
2. Click the "Add/Remove Programs" icon in Control Panel.
3. In the "Add/Remove Programs" screen, scroll down to find "MagicRotation"
   Click on it to highlight it.
4. Click the "Change/Remove" button to remove the program.
5. Click "Yes" to begin the uninstall process.
6. Wait until the "Uninstall Complete" dialog box appears.
7. After uninstall restart the system to complete the uninstallation.

Visit the MagicRotation website for technical support for MagicRotation, FAQs (questions and answers) and software upgrades.

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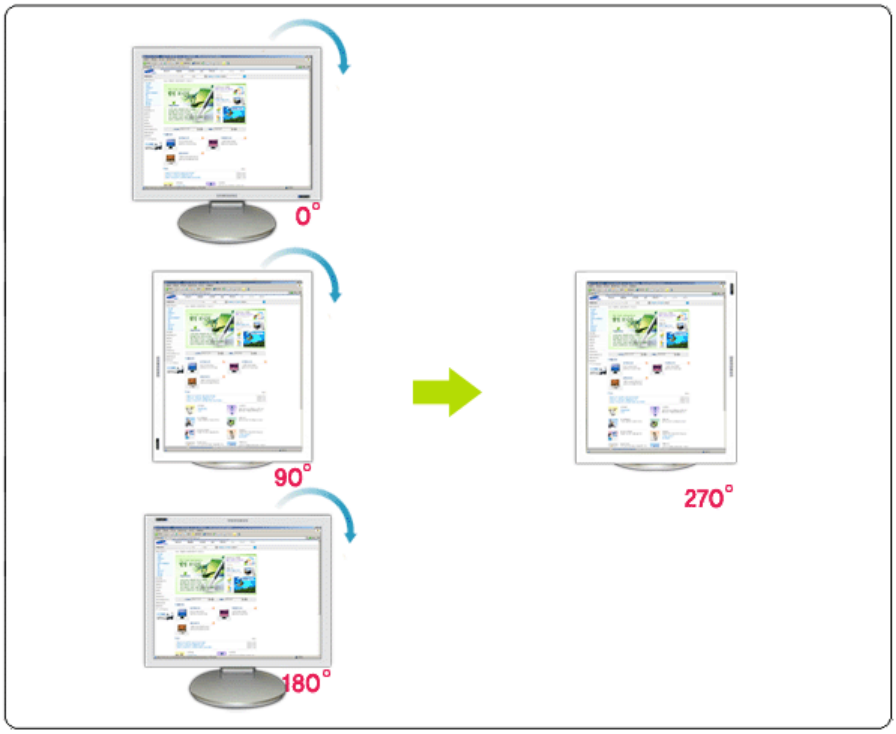

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4. Click the "Change/Remove" button to remove the program.
5. Click "Yes" to begin the uninstall process.

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7. After uninstall restart the system to complete the uninstallation.

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Troubleshooting

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Check List

Before calling for service, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Symptom	Check List	Solutions
No images on the screen. I cannot turn on the monitor.	Is the power cord connected properly?	Check the power cord connection and supply.
	Can you see "**No Connection Check Signal Cable**" on the screen?	**(When connecting 'DVI-A to D-Sub' Cable)** Check the signal cable connection. **(When connecting DVI cable)** If the message appears on the screen, even when the cable is properly connected, check the video source of the monitor by using the Power button on the front panel of the monitor. This may happen because the monitor is set to Analog.
	If the power is on, reboot the computer to see the initial screen (the login screen), which can be seen.	If the initial screen (the login screen) appears, boot the computer in the applicable mode (the safe mode for Windows ME/XP/2000) and then change the frequency of the video card. (Refer to the Preset Timing Modes) Note: If the initial screen (the login screen) does not appear, contact the Service Center or your dealer.
	Can you see **"Not Optimum Mode", "Recommended Mode 1280 x 1024 60Hz"** on the screen?	You can see this message when the signal from the video card exceeds the maximum resolution and frequency that the monitor can properly handle. Adjust the maximum resolution and frequency that the monitor can properly handle.
	There is no image on the screen.	The monitor is in PowerSaver mode. Press any key on the keyboard to activate the monitor and restore the image on the screen. If the monitor does not respond, activate the source conversion feature located on the front of the monitor, or try moving the mouse or pressing a key on the keyboard again.

	Is the monitor connected using the DVI cable?	You may get a blank screen if you boot the system before you connect the DVI cable, or disconnect and then reconnect the DVI cable while the system is running as certain types of graphic cards do not send out video signals. Connect the DVI cable and then reboot the system.
The screen shows strange colors or just black and white.	Is the screen displaying only one color as if looking at the screen through a cellophane paper?	Check the signal cable connection. Make sure the video card is fully inserted in it's slot.
	Have the screen colors become strange after running a program or due to a crash between applications?	Reboot the computer.
	Has the video card been set properly?	Set the video card by referring to the video card manual.
The screen suddenly has become unbalanced.	Have you changed the video card or the driver?	Adjust screen image position and size using the MagicTune™ program.
	Have you adjusted the resolution or frequency to the monitor?	Adjust the resolution and frequency at the video card. (Refer to the Preset Timing Modes).
	The screen can be unbalanced due to the cycle of the video card signals. Readjust position by referring to the MagicTune™ program.	
The screen is out of focus.	Have you adjusted the resolution or frequency on the monitor?	Adjust the resolution and frequency of the video card. (Refer to the Preset Timing Modes).
There are only 16 colors shown on the screen. The screen colors have changed after changing the video card.	Have the Windows colors been set properly?	Windows ME/2000/XP: Set the colors properly at the **Control Panel** → **Display** → **Settings**.
	Has the video card been set properly?	Set the video card by referring to the video card manual.
There is a message that reads "Unrecognized monitor, Plug & Play (VESA DDC) monitor found".	Have you installed the monitor driver?	
	See the video card manual to see if the Plug & Play (VESA DDC) function can be supported.	Install the monitor driver according to the Driver Installation Instructions.
Check when MagicTune™ does not function properly.	MagicTune™ feature is found only on PC (VGA) with Window OS that supports Plug and Play.	* To check whether your PC is available for MagicTune™ feature, follow the steps below (When Windows is XP); Control Panel -> Performance and Maintenance -> System -> Hardware -> Device Manager -> Monitors -> After deleting Plug and Play monitor, find 'Plug and Play monitor' by searching new Hardware. MagicTune™ is an additional software for the monitor. Some graphic cards may not support your monitor. When you have a problem with the graphic card, visit our website to check the compatible graphic card list provided. http://www.samsung.com/monitor/magictune
MagicTune™ doesn't work properly.	Have you changed your PC or video	Download the latest program. The program can be downloaded

graphic card?	http://www.samsung.com/monitor/magictune.

Visit our website and download the installation software for MagicTune™ MAC.

Check the following items if there is trouble with the monitor.

1. Check if the power cord and the video cables are properly connected to the computer.
2. Check if the computer beeps more than 3 times when booting.
   (If it does, request an after-service for the main board of the computer.)
3. If you installed a new video card or if you assembled the PC, check if the installed the adapter (video) driver and the monitor driver.
4. Check if the scanning ratio of the video screen is set at 56Hz ~ 75Hz.
   (Do not exceed 75Hz when using the maximum resolution.)
5. If you have problems in installing the adapter (video) driver, boot the computer in Safe Mode, remove the Display Adapter at the "**Control Panel→System→Device Administrator**" and then reboot the computer to reinstall the adapter (video) driver.

If problems repeatedly occur, contact an authorized service center.

Q & A

Question	Answer
How can I change the frequency?	Frequency can be changed by reconfiguring the video card. Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)
How can I adjust the resolution?	Windows ME/XP/2000 : Set the resolution at the **Control Panel→Display→Settings**. * Contact the video card manufacturer for details.
How can I set the Power Saving function?	Windows ME/XP/2000 : Set the function at BIOS-SETUP of the computer or the screen saver. (Refer to Windows/Computer Manual).
How can I clean the outer case/LCD Panel?	Disconnect the power cord and then clean the monitor with a soft cloth, using either a cleaning solution or plain water. Do not leave any remains of the detergent nor scratch the case. Do not allow any water to go inside the monitor.

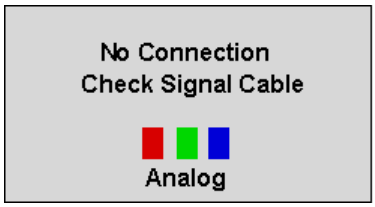
Self-Test Feature Check

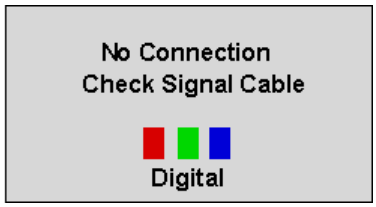
Self-Test Feature Check | Warning Messages | Environment | Useful Tips

Your monitor provides a self test feature that allows you to check whether your monitor is functioning properly.

Self-Test Feature Check

1. Turn off both your computer and the monitor.
2. Unplug the video cable from the back of the computer.
3. Turn on the monitor.
   If the monitor is functioning properly, you will see a box in the illustration below.



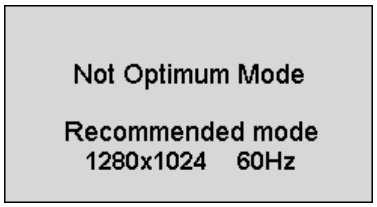


This box appears during normal operation if the video cable becomes disconnected or damaged.

4. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.
   If your monitor screen remains blank after using the previous procedure, check your video controller and computer system; your monitor is functioning properly.

Warning Messages

If there is something wrong with the input signal, the message below appears on the screen or the screen goes blank although the power indicator LED is still on. The message may indicate that the monitor is out of scan range or that you need to check the signal cable.



Environment

The location and the position of the monitor may influence the quality and other features of the monitor.

1. If there are any sub woofer speakers near the monitor, unplug and relocate the woofer to another room.
2. Remove all electronic devices such as radios, fans, clocks and telephones that are within 3 feet (one meter) of the monitor.

Useful Tips

- A monitor recreates visual signals received from the computer. Therefore, if there is trouble with the computer or the video card, this can cause the monitor to become blank, have poor coloring, noise, video mode not supported, etc. In this case, first check the source of the problem, and then contact a service center or your dealer.
- **Judging the monitor's working condition**
  If there is no image on the screen or a **"Not Optimum Mode","Recommended Mode 1280 x 1024 60Hz"** message comes up, disconnect the cable from the computer while the monitor is still powered on.
  - If there is a message coming up on the screen or if the screen goes white, this means the monitor is in working condition.
  - In this case, check the computer for trouble.

General

General	
Model Name	SyncMaster 960BG
LCD Panel	
Size	19" Diagonal
Display area	376.32mm (H) x 301.056mm (V)
Pixel Pitch	0.294mm (H) x 0.294mm (V)
Type	a-si TFT active matrix
Synchronization	
Horizontal	30 ~ 81 kHz (Analog/Digital)
Vertical	56 ~ 75 Hz (Analog/Digital)
Display Color	
16.7M Colors	
Resolution	
Optimum resolution	1280 x 1024@60 Hz
Maximum resolution	1280 x 1024@75 Hz
Input Signal, Terminated	
RGB Analog, DVI(Digital Visual Interface) Compliant Digital RGB 0.7 Vp-p±5%, positive bright 75 Ω±10 % (terminated) Separate H/V sync, Composite, SOG, TTL level, positive or negative	
Maximum Pixel Clock	
140 MHz (Analog/Digital)	
Power Supply	
AC 100 ~ 240 VAC ±10%, 60/50 Hz ± 3Hz	
Signal Cable	
DVI-A to D-Sub cable, Detachable, 1.8m DVI-I to DVI-I connector, Detachable, 2.0m (Option)	
Signal Connectors	

15pin 3-row D-Sub connector, 24pin 3-row DVI-I connector

Power Consumption

Less than 38W

Dimensions (WxDxH)/ Weight

420.2 x 269.0 x 420.5 mm(16.5 x 10.6 x 16.6 inch) / 6.0 kg

Environmental considerations

Operating	Temperature: 50°F ~ 104°F(10°C ~ 40°C) Humidity: 10% ~ 80%, non-condensing
Storage	Temperature: -4°F ~113°F (-20°C ~ 45°C) Humidity: 5% ~ 95%, non-condensing

Plug and Play Capability

This monitor can be installed on any Plug & Play compatible system. Interaction of the monitor and computer systems will provide the best operating conditions and monitor settings. In most cases, monitor installation will proceed automatically, unless the user wishes to select alternate settings.

Dot Acceptable

TFT LCD panel manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without uneasiness.

- For example, the number of TFT LCD sub pixels that is contained in this product are 3,932,160.

Note: Design and specifications are subject to change without prior notice.

PowerSaver

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use a software utility installed on your computer to set up this feature.

State	Normal Operation	Power saving mode EPA/ENERGY 2000	Power off
Power Indicator	Blue	Black	Black
Power Consumption	Less than 38W	Less than 1W (Off-mode)	Less than 1W (120 Vac / 230 Vac)

This monitor is EPA ENERGY STAR® compliant and ENERGY2000 compliant when used with a computer equipped with VESA DPMS functionality.
As an ENERGY STAR® Partner, SAMSUNG has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically (Exception : 640 x 480/60Hz, 720 x 400/70Hz, 800 x 600/60Hz) However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

Table 1. Preset Timing Modes

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.00	-/-
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+,-/+,-
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.00	+/+
VESA, 1280 x 960	60.000	60.000	108.00	+/+
VESA, 1280 x 1024	63.981	60.020	108.00	+/+
VESA, 1280 x 1024	79.976	75.025	135.00	+/+

Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle and the inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called Vertical Frequency or Refresh Rate. Unit: Hz

Contact SAMSUNG WORLD-WIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

North America		
CANADA	1-800-SAMSUNG (7267864)	http://www.samsung.com/ca
MEXICO	01-800-SAMSUNG (7267864)	http://www.samsung.com/mx
U.S.A	1-800-SAMSUNG (7267864)	http://www.samsung.com

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BRAZIL	0800-124-421	http://www.samsung.com/br
CHILE	800-726-7864 (SAMSUNG)	http://www.samsung.com/cl
COSTA RICA	0-800-507-7267	http://www.samsung.com/latin
ECUADOR	1-800-10-7267	http://www.samsung.com/latin
EL SALVADOR	800-6225	http://www.samsung.com/latin
GUATEMALA	1-800-299-0013	http://www.samsung.com/latin
JAMAICA	1-800-234-7267	http://www.samsung.com/latin
PANAMA	800-7267	http://www.samsung.com/latin
PUERTO RICO	1-800-682-3180	http://www.samsung.com/latin
REP. DOMINICA	1-800-751-2676	http://www.samsung.com/latin
TRINIDAD & TOBAGO	1-800-7267-864	http://www.samsung.com/latin
VENEZUELA	1-800-100-5303	http://www.samsung.com/latin

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U.A.E	800SAMSUNG (7267864)	http://www.samsung.com/mea

Terms

- **Dot Pitch**
  The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

- **Vertical Frequency**
  The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate. Unit: Hz

  Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz.

- **Horizontal Frequency**
  The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

- **Interlace and Non-Interlace Methods**
  Showing the horizontal lines of the screen from the top to the bottom in order is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

- **Plug & Play**
  This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

- **Resolution**
  The number of horizontal and vertical dots used to compose the screen image is called 'resolution'. This number shows the accuracy of the display. High resolution is good for performing multiple tasks as more image information can be shown on the screen.

  Example: If the resolution is 1280 x 1024 , this means the screen is composed of 1280 horizontal dots (horizontal resolution) and 1024 vertical lines (vertical resolution).

For Better Display

1. Adjust computer resolution and screen injection rate (refresh rate) oncomputer as described below to enjoy the best quality of picture. You can have an uneven quality of picture in the screen if the best quality of picture is not provided in TFT-LCD.
   - Resolution: 1280 x 1024
   - Vertical frequency (refresh rate): 60 Hz
2. TFT LCD panel manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE color seem to be bright sometimes or some of black pixels could be seen.
   This is not from bad quality and you can use it without uneasiness.
   - For example, the number of TFT LCD sub pixels that is contained in this product are 3,932,160.
3. When you clean the monitor and the panel outside, please apply the recommended small amount of cleaner by using soft and dry cloth and polish it. Let LCD area not to be forced but to be scrubbed out softly.
   If excessive force is applied, you can have a stain on it.

4. If you are not satisfied with the quality of picture, you can get better quality of picture by executing "auto adjustment function" in display screen that is appeared as window termination button is pressed.
   If there's still noise after automatic adjustment, use FINE/COARSE adjustment function.

5. If you view a fixed screen for an extended period of time, residual image or blurriness may appear.
   Change the mode to energy save or set a screensaver to moving picture when you need to be away from the monitor for an extended period of time.

Authority

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Class B
This device is a Class B digital apparatus. For Safety and EMC compliance guide, you may refer to "Regulatory" Guide.

SAMSUNG ELECTRONICS

MÉXICO	
IMPORTADO POR:	SAMSUNG ELECTRONICS MÉXICO. S.A. de C.V. Vía Lopez Portillo No. 6, Col. San Fco. Chilpan Tultitlán, Estado de México, C.P. 54940 Tel: 01-55-5747-5100 / 01-800-726-7864
EXPORTADO POR:	Samsung Electronics CO.,LTD. 416, Mae tan-3dong, Yeongtong - gu, Suwon City, Gyeonggi-do Korea

PRODUCT INFORMATION (Image Retention Free)

LCD Monitors and TVs may have image retention when switching from one image to another especially after displaying a stationary image for a long time.
This guide is to demonstrate correct usage of LCD products in order to protect them from Image retention.

- **What is Image retention ?**
  During normal operation of a LCD panel, pixel image retention doesn't occur. However, if the same image is displayed for a long time, a slight difference in electric charge accumulates between the two electrodes which encase the liquid crystal. This may cause the liquid crystal to build up in a certain areas of the display. Thus, the previous image is retained when switching to a new video image. All display products, including LCD,are subject to image retention. This is not a product defect.

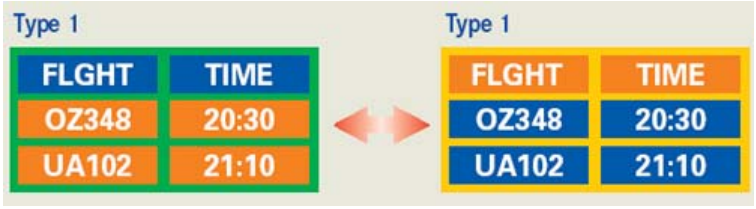
  Please follow the suggestions below to protect your LCD from image retention

- **Power Off, Screen Saver, or Power Save Mode**
  Ex)
  - Turn the power off when using a stationary pattern.
    - Turn the power off for 4 hours after 24 hours in use
    - Turn the power off for 2 hours after 12 hours in use
  - Use a Screen saver if possible
    - Screen saver in one color or a moving image is recommended.
  - Set the Monitor to power off with the PC Display Properties Power Scheme.

- **Suggestions for specific applications**
  Ex) Airports, Transit Stations, Stock Markets, Banks, and Controlling Systems
  We recommend that you follow set up of your display system program as below:

- **Display Information together with Logo or Moving image cycle.**
  Ex) Cycle : Display Information for 1 hour followed by a
  Display Logo or moving image for 1 minute.

- **Change the Color Information periodically (Use 2 different colors).**
  Ex) Rotate the Color Information with 2 colors every 30 minutes.



Avoid using a combination of characters and background color with large difference in luminance.
Avoid using Grey colors, which can cause Image retention easily.

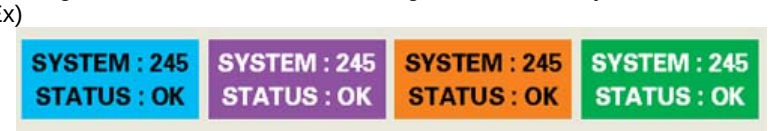
- Avoid: Colors with big difference in luminance (Black & White, Grey)

Ex)

- Recommended settings: Bright colors with little difference in luminance

- Change the characters color and background color every 30 minutes

Ex)



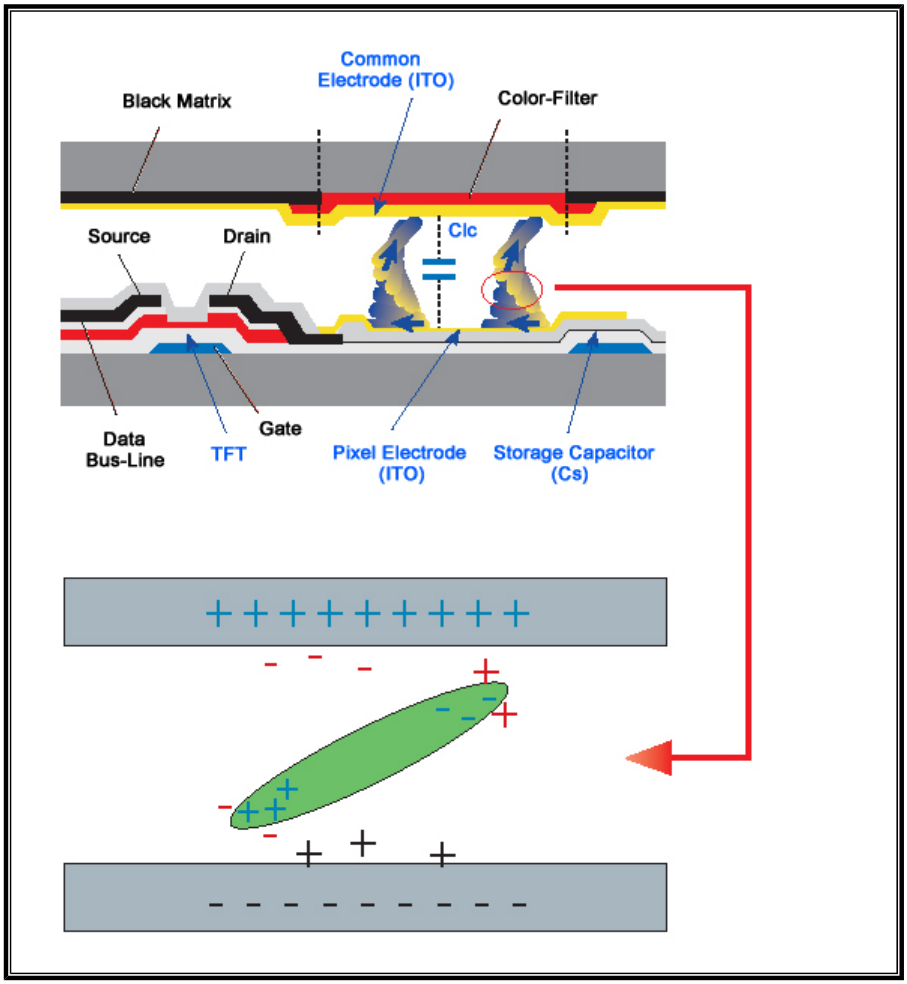
- Every 30 minutes, change the characters with movement.

Ex)

- **The best way to protect your monitor from Image retention is to set your PC or System to operate a Screen Saver program when you are not using it.**

  Image retention may not occur when a LCD panel is operated under normal conditions.

  Normal conditions are defined as continuously changing video patterns. When the LCD panel is operated for a long time with a fixed pattern (-over 12 hours-), there may be slight difference in voltage between electrodes that work the liquid crystal (LC) in a pixel. The voltage difference between electrodes increases with time, forcing the liquid crystal to lean. When this occurs, the previous image may be seen when the pattern is changed.
  To prevent this, the accumulated voltage difference must be decreased.



- Our LCD Monitor satisfies ISO13406-2 Pixel fault Class II

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment) - Europe only

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.